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REMARKS

Claims 1, 28, and 29 have been amended to further clarify the invention. Claims 18 and 34 have been canceled without prejudice to the filing of continuation applications. Claims 19-22, 31, 35, and 37 have been amended to change their dependence, in view of the canceled claims or the objections cited in the Office Action. New claims 69-75 have been added. Support for the amendment to claims 1, 28, and 29 can be found, for example, in canceled claims 18 and 34. Support for new claims 69-75 can be found in original claims 3, 9, 14-16, and 67-68. Claims 1-17, 19-33, and 35-75 are currently pending. No new matter is added by this amendment.

Turning to the Office Action, the following objections and rejections are asserted by the Office: claim 31 stands objected to as lacking antecedent basis; claims 1-2, 13, 23-24, 28-29, 33, 39, and 41-43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,938,617 ("Vo-Dinh"); claims 4, 6-8, 10, 12, 17, and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vo-Dinh; claims 18-22, 26-27, 32, 34-38, and 44-66 stand rejected under § 103(a) as being unpatentable over Vo-Dinh in view of U.S. Patent 6,011,626 ("Hielscher"); claims 11 and 25 stand rejected under § 103(a) as being unpatentable over Vo-Dinh in view of U.S. Patent 5,477,332 ("Stone"); claim 5 stands rejected under § 103(a) as being unpatentable over Vo-Dinh in view of U.S. Patent 5,973,842

("Spangenberg"); and claims 3, 9, 14-16, 40, and 67-68 stand objected to as being dependent on a rejected base claim, with the Office indicating that the claims would be allowable if rewritten in independent form.

Under the present amendment, claims 69-75 have been added. Claims 69-75 correspond to allowable original claims 3, 9, 14-16, 40, and 67-68, and include all of the limitations of the base claims from which original claims 3, 9, 14-16, 40, and 67-68 depended. New claims 69-75, therefore, are in condition for allowance. Notice to this effect is respectfully requested.

Also under the present amendment, claim 31 has been amended to depend on claim 30 rather than claim 29, thus providing antecedent basis for the claim. Withdrawal of the objection to claim 31 is therefore respectfully requested.

The remaining rejections are addressed below.

Rejection Under 35 U.S.C. § 102

Claims 1-2, 13, 23-24, 28-29, 33, 39, and 41-43 stand rejected as being anticipated by Vo-Dinh. Applicant respectfully submits that the amended claims overcome the rejection based on the cited reference. The amended claims provide that the system for directing light includes an optical pattern generator configured to convert the light of the second wavelength into light having a preselected intensity pattern. The system also includes an optical relay structure configured to project the light having the preselected pattern onto the examination area,

where the projected pattern substantially conforms to the arrangement of sample sites in at least a portion of a sample holder positioned in the examination area.

Vo-Dinh does not disclose these limitations. As a result, the reference does not anticipate the amended claims. Withdrawal of the § 102(b) rejection of claims 1-2, 13, 23-24, 28-29, 33, 39, and 41-43 is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 4, 6-8, 10, 12, 17, and 30, claims 18-22, 26-27, 32, 34-38, and 44-66, claims 11 and 25, and claim 5 stand separately rejected as being unpatentable over Vo-Dinh, over Vo-Dinh in view of Hielscher, over Vo-Dinh in view of Stone, and over Vo-Dinh in view of Spangenberg, respectively. Applicant respectfully submits that the amended claims overcome the rejections based on the cited references.

Vo-Dinh relates to a synchronous luminescence instrument said to be useful for performing medical diagnostics and screening for biological pathogens. Vo-Dinh does not disclose or suggest an instrument wherein the system for directing light includes an optical pattern generator for converting light into light having a preselected intensity pattern. Vo Dinh also does not disclose or suggest a system wherein the light having the preselected intensity pattern is projected onto the examination area. Thus a person of ordinary skill in the art would not be motivated to arrive at Applicant's invention based on Vo Dinh.

Concerning claim 17, the Office asserts that it would have been obvious to use a beamsplitter, as claimed, in place of Vo Dinh's lens, to direct light to a detector. Applicant respectfully disagrees. A beamsplitter can separate a single beam of light into two or more beams. A lens cannot make such a separation. Thus, Vo Dinh's lens, unlike Applicant's beamsplitter, is incapable of creating an intensity pattern. Further, the beamsplitter is used to distribute the excitation light, rather than the emission light. None of these limitations are disclosed or suggested by Vo Dinh.

For the above reasons, claims 4, 6-8, 10, 12, 17, and 30 are not rendered obvious by Vo-Dinh.

The Office cites Hielscher for its alleged disclosure of a polarizer "configured to convert light into light having a preselected intensity pattern" and for its alleged disclosure of an "optical relay system for projecting the light onto an examination area to form a projected pattern that substantially conforms to the sample." Office Action, page 6. The Office contends that it would have been obvious to combine Hielscher's polarizer and optical relay system with Vo-Dinh's disclosed invention to arrive at the claimed invention. Applicant respectfully disagrees with the Office's characterization of Hielscher and with the Office's conclusion.

Hielscher does not disclose or suggest an instrument that includes an optical pattern generator for generating light of a

preselected intensity pattern, or one where the preselected intensity pattern is projected onto the examination area, as presently claimed. The combination of Hielscher with Vo-Dinh, therefore, which also does not disclose or suggest these elements, would not provide the claimed invention.

As is known to those skilled in the art, light polarizers do not change the intensity pattern of light, and are incapable of creating beamlets. Thus, the first polarizer in Hielscher does not generate an *intensity* pattern, or an intensity pattern having a preselected pattern, as asserted by the Office. The only intensity patterns found in Hielscher are those formed by the light scattered from the scattering medium, and which are used to differentiate between turbid media. Hielscher, col. 1, lines 10-12. These intensity patterns, however, are not in a *preselected* pattern nor are they generated by an optical pattern generator, as presently claimed. Rather, Hielscher's intensity patterns are formed by, and therefore dependent on, the medium being examined.

In addition, contrary to the Office's position, Hielscher does not disclose the generation of an intensity pattern that substantially conforms to the arrangement of sample sites. As noted above, any intensity patterns in Hielscher are generated by the medium, and therefore cannot be directed at the media/samples. It further follows that Hielscher's intensity pattern cannot be made to substantially conform to the arrangement of sample sites.

Concerning claims 26 and 27, the Office contends that it would have been obvious to include a fluid dispenser to regulate the amount of fluid necessary for each sample. Applicant respectfully disagrees. In Applicant's invention, a fluid is used to initiate a reaction in the fluid sample. Thus the dispenser is synchronized with the data collection (see claim 27). These limitations are not disclosed or suggested by Hielscher.

Applicant submits that the combination of Hielscher with Vo-Dinh would not provide the claimed invention. Accordingly, claims 18-22, 26-27, 32, 34-38, and 44-66 are not rendered obvious by the references, either alone or in combination.

The Office cites Stone for its alleged disclosure of a spectral filter, and Spangenberg for its alleged disclosure of a reference beam monitor, and concludes that claims 11 and 25 are obvious over Vo-Dinh in combination with Stone and claim 5 is obvious over Vo-Dinh in combination with Spangenberg. Applicant respectfully submits that the amended claims overcome the rejections based on the cited references. In particular, as discussed above, the cited art does not disclose or suggest an instrument wherein the system for directing light includes an optical pattern generator configured to convert the light of the second wavelength into light having a preselected intensity pattern, or wherein the system also includes an optical relay structure configured to project the light having the preselected

pattern onto the examination area. Accordingly, claims 5, 11, and 25 are not rendered obvious by the references, either alone or in combination.

For at least the reasons cited above, Applicant respectfully submits that the pending claims are not obvious over any of the cited references. Accordingly, withdrawal of the § 103 rejection of the claims is respectfully requested.

Applicant submits that claims 1-17, 19-33, and 35-75 are now in condition for allowance and solicit action to that end. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

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